

## Claims

What is claimed is:

- 1        1. A method, comprising:
  - 2            coupling a plurality of receivers to a first frequency reference to
  - 3            communicate with a first station over a corresponding plurality of signal paths;
  - 4            and
  - 5            selectively coupling one of the plurality of receivers to a second frequency
  - 6            reference to communicate with a second station over a signal path not included
  - 7            in the plurality of signal paths.
- 1        2. The method of claim 1, further comprising:
  - 2            determining whether a quality of service provided by the second station is
  - 3            greater than a quality of service provided by the first station.
- 1        3. The method of claim 1, wherein the quality of service provided by the first  
2            station includes at least one of a network type, a network capability, a  
3            network activity level, a signal strength, a bandwidth, a signal-to-noise ratio,  
4            a signal-to-interference ratio, a multipath condition, a service provider, a  
5            monetary cost, user-preferred information, and a user-preferred service.
- 1        4. The method of claim 1, further comprising:
  - 2            adjusting the first frequency reference to provide a reference frequency
  - 3            substantially equal to a reference frequency provided by the second frequency
  - 4            reference.
- 1        5. The method of claim 1, further comprising:
  - 2            handing off communications between the first station and the plurality of
  - 3            receivers from the first station to the second station after determining that a

4       quality of service provided by the second station is greater than a quality of  
5       service provided by the first station.

1       6. The method of claim 1, further comprising:  
2           selectively coupling another one of the plurality of receivers to a third  
3           frequency reference to communicate with a third station over another signal path  
4           not included in the plurality of signal paths.

1       7. The method of claim 1, further comprising:  
2           adjusting the second frequency reference to provide a new reference  
3           frequency; and  
4           communicating with a new station using a new signal path not included in  
5           the plurality of signal paths.

1       8. An article comprising a machine-accessible medium having associated data,  
2           wherein the data, when accessed, results in a machine performing:  
3           coupling a plurality of receivers to a first frequency reference to  
4           communicate with a first station over a corresponding plurality of signal paths;  
5           and  
6           selectively coupling one of the plurality of receivers to a second frequency  
7           reference to communicate with a second station over a signal path not included  
8           in the plurality of signal paths.

1       9. The article of claim 8, wherein the plurality of receivers are configured to  
2           operate as a multiple-input, multiple-output system, and wherein selectively  
3           coupling one of the plurality of receivers to the second frequency reference  
4           further comprises:  
5           decoupling the one of the plurality of receivers from operating as a part of  
6           the multiple-input, multiple-output system; and

7                   coupling the one of the plurality of receivers to operate as a receiver  
8                   independent from the multiple-input, multiple-output system.

1           10. The article of claim 8, wherein the data, when accessed, results in the  
2           machine performing:

3               selecting a second reference frequency to be provided by the second  
4           frequency reference based on one of an arbitrary scan process, a list of  
5           frequencies, and a location of the plurality of receivers.

1           11. The article of claim 8, wherein a first reference frequency to be provided by  
2           the first frequency reference is selected in accordance with a channel designated  
3           by one of an Institute of Electrical and Electronics Engineers (IEEE) 802.11  
4           standard or an IEEE 802.16 standard.

1           12. The article of claim 8, wherein a selected one of the plurality of receivers is  
2           included in a transceiver.

1           13. An apparatus, comprising:

2               a plurality of receivers to couple to a first frequency reference and to  
3           communicate with a first station using a plurality of signal paths, wherein at  
4           least one of the plurality of receivers can be selectively coupled to the first  
5           frequency reference or to a second frequency reference to communicate with a  
6           second station using a signal path not included in the plurality of signal paths.

1           14. The apparatus of claim 13, wherein the plurality of signal paths comprise a  
2           portion of a multiple-input, multiple-output communication system.

1           15. The apparatus of claim 13, wherein the first frequency reference comprises a  
2           first frequency synthesizer, and wherein the second frequency reference  
3           comprises a second frequency synthesizer.

- 1        16. The apparatus of claim 13, further comprising:
  - 2                a determination module to determine whether a quality of service provided
  - 3                by the second station is greater than a quality of service provided by the first
  - 4                station.
- 1        17. The apparatus of claim 13, wherein the quality of service provided by the
- 2                first station includes at least one of a network type, a network capability, a
- 3                network activity level, a signal strength, a bandwidth, a signal-to-noise ratio, a
- 4                signal-to-interference ratio, a multipath condition, a service provider, a monetary
- 5                cost, user-preferred information, and a user-preferred service.
- 1        18. The apparatus of claim 13, further comprising:
  - 2                a third frequency reference, wherein at least another one of the plurality of
  - 3                receivers can be selectively coupled to the first frequency reference or the third
  - 4                frequency reference to communicate with a third station using another signal
  - 5                path not included in the plurality of signal paths.
- 1        19. The apparatus of claim 13, wherein the plurality of signal paths comprise a
- 2                portion of a multiple-input, multiple-output communication system, and
- 3                wherein the signal path is a search signal path, further comprising:
  - 4                a third frequency reference, wherein at least another one of the plurality of
  - 5                receivers can be selectively coupled to the first frequency reference or the third
  - 6                frequency reference to communicate with a third station using a second search
  - 7                signal path not included in the plurality of signal paths.
- 1        20. A system, comprising:
  - 2                a plurality of receivers to couple to a first frequency reference and to
  - 3                communicate with a first station using a plurality of signal paths, wherein at
  - 4                least one of the plurality of receivers can be selectively coupled to the first

5       frequency reference or to a second frequency reference to communicate with a  
6       second station using a signal path not included in the plurality of signal paths;  
7            a processor to couple to the plurality of receivers; and  
8            a display to couple to the processor.

1       21. The system of claim 20, further comprising:  
2            a transceiver including a selected one of the plurality of receivers.

1       22. The system of claim 20, further comprising:  
2            a third frequency reference, wherein at least another one of the plurality of  
3       receivers can be selectively coupled to the first frequency reference or to the  
4       third frequency reference to communicate with a third station using another  
5       signal path not included in the plurality of signal paths.

1       23. The system of claim 20, further comprising:  
2            a one-to-one corresponding plurality of antennas to couple to the plurality of  
3       receivers.